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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,632	10/31/2005	Jeong-Il Sco	51876P839	6223

8791 7590 02/08/2007
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EXAMINER

LEE, PING

ART UNIT	PAPER NUMBER
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2615

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/531,632

Applicant(s)

SEO ET AL.

Examiner

Ping Lee

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 16-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 16-25 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: the newly submitted claim 16 has a step of coding the sound object and the three-dimensional audio scene description information including the sound source characteristics information of the sound object which is feature that was not required for the invention specified in claims 1-13. The newly submitted claim 21 has a step of decoding a sound object and three-dimensional audio scene description information including the sound source characteristics information of the sound object which is feature that was not required for the invention specified in claims 1-13.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 16-25 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Specification

2. The amendment filed 11/9/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the paragraphs added on

pages 2-8 (the marking copy) are not supported by the specification as originally filed.

Applicant's remark indicated that "deleted portions are followed immediately by the new portion which contain the same disclosure but are rewritten for clarity" is deceitful. For example, on p. 2 of the marking copy, the deleted portion "According to MPEG 4 ..." is not followed immediately by the new portion which contains the same disclosure.

Applicant introduced the new information, such as encoder and decoder, in this newly added paragraph. Furthermore, the paragraph immediately followed this newly added paragraph is the same paragraph that was being deleted before. In other words, applicant never deletes the paragraph. The purpose of the substituted specification is to introduce new matter. On pages 7 and 8, new matter is clearly being introduced to support the newly added claims 16 and 20. Specifically, the specification as originally filed fails to disclose a method for processing a three-dimensional audio scene including the step of decoding a sound object and 3D audio scene description information; and also fails to disclose a method for processing a three-dimensional audio scene including the step of coding the sound object and the 3D audio scene description information.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Padula (US006330486B1).

Regarding claims 1, 5 and 9, Padula discloses a method for generating a three-dimensional audio scene (col. 3, lines 31-33) with a sound source whose spatiality is extended (sound source is movable), comprising the steps of:

- a) generating a sound object (72); and
- b) generating three-dimensional (73-79) audio scene description information including sound source characteristics information for the sound object,

wherein the sound source characteristics information includes spatiality extension information of the sound source which information on the size and shape the sound source expressed in a three-dimensional space (col. 3, lines 46-49).

Regarding claims 2, 6, 10, 13, 14 and 15, Padula shows that the spatiality extension information of the sound source includes sound source dimension information that expressed as three components, including an x-component, a y-component and a z-component, of a set of three-dimensional coordinates (col. 7, lines 61-62).

Regarding claims 3, 7 and 11, the claimed geometrical center location information of the sound source dimension information reads on the location defined by x, y, z coordinates or polar coordinates.

Regarding claims 4, 8 and 12, Padula shows that the spatiality extension information of sound source further includes direction information of the sound source and describes a three-dimensional audio scene by extending the spatiality of the sound source in a direction vertical to the direction of the sound source (col. 10, lines 27-53).

Response to Arguments

5. Applicant's arguments filed 11/9/06 have been fully considered but they are not persuasive.

On p. 9, applicant argued that Padula does not disclose a method for generating an audio scene that is three-dimensional. Examiner disagreed. When the user views the audio scene on the screen as shown in Fig. 2, 3 or 5, the scene is in three-dimensional. If the scene is not in three-dimensional, how can the source be located in a three-dimensional virtual environment? In other words, how can the user perceive the source as real as possible as in virtual reality (col. 1, lines 16-17) if the audio scene is not in three-dimensional? See also col. 3, lines 28-37.

On p. 9, applicant argued that Padula fails to show the sound source whose spatiality is extended. It is noted that the features upon which applicant relies (i.e., focuses on the size and shape of the sound source to be expressed; and describing the spatiality of the sound source so as to result in a sound source of more than one dimension) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Whether Padula teaches a technique "independent of the particular audio source modeling techniques" is irrelevant.

On p. 10, applicant argued that Padula fails to teach generating a sound object. Examiner disagreed. As shown in Fig. 3, for example, the camera will generate a view including a sound object (54, 56 or 58).

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On p. 10, applicant argued that Padula teaches nothing in regard to the actual sound source characteristics information for a sound object. Examiner disagreed. Padula discloses that the information on the size and shape of the sound source in three-dimensional space (col. 3, lines 42-53) is needed to define the VRML scene. Without this information as alleged by applicant, the virtual reality scene cannot be generated.

On p. 11, applicant argued that the information as generated in Padula could not be read as the sound source characteristics including spatiality extension information of a sound source. Examiner disagreed. As defined in the office action, spatiality extension means that the sound source is moveable. Padula clearly discloses how to generate sound source characteristics when the sound source is moved. Without describing the sound source in terms of the size and shape, the computer would not be able to generate the audio source in the VRML scene.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

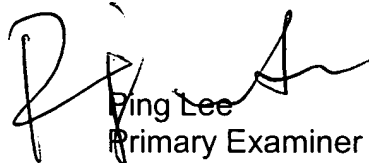
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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ping Lee
Primary Examiner
Art Unit 2615

pwl